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EXAMINER
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PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 04/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/479,031

Applicant(s)

GRANT ET AL.

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 January 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 129-171 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 129-171 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Notice to Applicant(s)***

1. Claims 129-171 of U.S. Application 09/479031 filed on 01/07/2000 are presented for examination.

**DETAILED ACTION**

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains more than 150 words.

Correction is required. See MPEP § 608.01(b).

4. The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 129-136 and 142-145 are rejected under 35 U.S.C. 102(e) as being anticipated by DeLuca et al. U.S. Patent No. 6,238,338 (hereinafter DeLuca).

7. As for claim 129, DeLuca shows an apparatus including: a hardware interface to be connected to a processing device (fig. 8A element 71); a data module to interact with at least one sensor and with the processing device (fig. 8 element 15); a display module to display data collection results on a display of the processing device (fig. 8 element 76).

8. As for claim 130, DeLuca shows the apparatus of claim 129 wherein the processing device is a handheld processing device (fig. 2 element 22).

9. As for claim 131, DeLuca shows the apparatus of claim 129 wherein the processing device is a personal computer (fig. 1 element 15).

10. As for claim 132, DeLuca shows the apparatus of claim 129 wherein the processing device is a combination of a handheld processing device and a personal computer (col. 6 lines 1-8).

11. As for claim 133, DeLuca shows the apparatus of claim 129 further comprising a memory module to store data supplied by the at least one sensor (col. 3 line 60).

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12. As for claim 134, DeLuca shows the apparatus of claim 129 wherein the software module further configured to calibrate the at least one sensor (col. 6 line 65).

13. As for claim 135, DeLuca shows the apparatus of claim 129 further comprising an alert module to notify a user of the apparatus of an event based on data provided by the at least one sensor (col. 6 lines 16-23).

14. As for claim 136, DeLuca shows the apparatus of claim 129 further comprising a power source (col. 4 lines 20-23).

15. As for claim 142, DeLuca shows the apparatus of claim 129 wherein the at least one sensor is an analog sensor (col. 5 lines 4-12).

16. As for claim 143, DeLuca shows the apparatus of claim 129 wherein the at least one sensor is a digital sensor (col. 5 lines 31-33).

17. As for claim 144, DeLuca shows the apparatus of claim 129 wherein the data module includes an analog-to-digital converter (col. 5 line 2).

18. As for claim 145, DeLuca shows the apparatus of claim 129 wherein the data module processes the data prior to display of the data collection results on the display (col. 9 lines 14-18).

19. Claims 146-156 are rejected under 35 U.S.C. 102(e) as being anticipated by DeLuca et al. U.S. Patent No. 6,238,338 (hereinafter DeLuca).

20. As to claim 146, DeLuca shows an apparatus comprising: a processing device (fig. 8 element 15); a sensor (fig. 8 element 12); and an adjustable module connected to the processing

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device and the sensor (fig. 4 element 15), the adjustable module processing data received from the sensor and displaying the data on a display of the processing device (fig. 1).

21. As for claim 147, DeLuca shows the apparatus of claim 146 wherein the processing device is a handheld device (fig. 2 element 22).

22. As for claim 148, DeLuca shows the apparatus of claim 146 wherein the processing device is a personal computer (fig. 1 element 15).

23. As for claim 149, DeLuca shows the apparatus of claim 146 wherein the processing device is a combination of a handheld device and a personal computer (col. 6 lines 1-8).

24. As for claim 150, DeLuca shows the apparatus of claim 146 wherein the sensor is an analog sensor (col. 5 lines 4-12).

25. As for claim 151, DeLuca shows the apparatus of claim 146 wherein the sensor is a digital sensor (col. 5 lines 31-33).

26. As for claim 152, DeLuca shows the apparatus of claim 146 wherein the adjustable module includes an analog-to-digital converter (col. 5 line 2).

27. As for claim 153, DeLuca shows the apparatus of claim 146 wherein the adjustable module further calibrates the sensor (col. 6 line 65).

28. As for claim 154, DeLuca shows the apparatus of claim 146 wherein the adjustable module further generates graphical representation of the data received from the sensor (col. 9 lines 14-18).

29. As for claim 155, DeLuca shows the apparatus of claim 146 wherein the adjustable module further directs the sensor to change data collection features of the sensor based on at least one user instruction (col. 9 lines 7-10).

30. As for claim 156, DeLuca shows the apparatus of claim 146 wherein the adjustable module further alerts a user of the apparatus of an event based on data received from the sensor (col. 6 lines 24-26).

31. Claims 158-170 are rejected under 35 U.S.C. 102(e) as being anticipated by DeLuca et al. U.S. Patent No. 6,238,338 (hereinafter DeLuca).

32. As for claim 158, DeLuca shows a method comprising: receiving data from a sensor, the sensor connected to an attachable device (col. 3 lines 11-13); processing the data at the attachable device (col. 3 lines 17-18); and providing results of the processing to a processing device for display (col. 6 line 6).

33. As for claim 159, DeLuca shows the method of claim 158 wherein the processing the data includes generating graphical representation of the data (col. 9 lines 14-18).

34. As for claim 160, DeLuca shows the method of claim 158 wherein the processing the data includes converting the data into digital form (col. 5 lines 48-50).

35. As for claim 161, DeLuca shows the method of claim 158 wherein the processing the data includes determining whether an event occurs (col. 9 lines 46-48).

36. As for claim 162, DeLuca shows the method of claim 161 further comprising generating alert signal to display at the processing device if the event occurs (col. 9 lines 49-50).

37. As for claim 163, DeLuca shows the method of claim 158 further comprising calibrating the sensor based on at least one instruction of a user (col. 6 line 65).

38. As for claim 164, DeLuca shows the method of claim 158 further comprising annotating the data based on at least one instruction of a user (col. 9 lines 7-10).

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39. As for claim 165, DeLuca shows the method of claims 158 further comprising changing options of the sensor based on at least one instruction of the user (col. 8 lines 13-16).

40. As for claim 166, DeLuca shows the method of claim 165 wherein options include sampling rates (col. 8 line 15).

41. As for claim 167, DeLuca shows the method of claim 165 wherein options include a scale of measurement (col. 8 lines 46-50).

42. As for claim 168, DeLuca shows the method of claim 165 wherein options include measurement units (col. 8 lines 17-20).

43. As for claim 169, DeLuca shows the method of claim 158 further comprising changing display of the data based on user actions (col. 9 lines 19-22).

44. As for claim 170, DeLuca shows the method of claim 169 wherein the user actions are provided via a set of controls of the processing device (col. 9 lines 22-24).

45. Claims 171 is rejected under 35 U.S.C. 102(e) as being anticipated by DeLuca et al. U.S. Patent No. 6,238,338 (hereinafter DeLuca). DeLuca shows an apparatus comprising: means for receiving data from a sensor, the sensor connected to an attachable device; means for processing the data at the attachable device; and means for providing results of the processing to a processing device for display.

***Claim Rejections - 35 USC § 103***

46. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

47. Claim 137 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view of McNabb U.S. Patent No. 5,927,603. DeLuca does not specifically show the apparatus of claim 129 wherein the at least one sensor is a sensor for assessing chemical composition of a liquid sample. However, McNabb shows the apparatus wherein the at least one sensor is a sensor for assessing chemical composition of a liquid sample (col. 12 lines 58-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the chemical sensor of McNabb with the apparatus of DeLuca because it would provide for detecting any chemical composition such as moisture content within soil for analysis in order to improve the soil condition.

48. Claims 138-139 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view of Amano et al. U.S. Patent No. 5,941,837 (hereinafter Amano).

49. As for claim 138, DeLuca does not specifically show the apparatus of claim 129 wherein the at least one sensor is a sensor for monitoring athletic activity. However, Amano shows the apparatus wherein the at least one sensor is a sensor for monitoring athletic activity (col. 20 lines 36-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the activity monitoring sensor of Amano with the apparatus of DeLuca because it would provide for measuring the user's pulse rate and the exercise amount in order to provide guidance to the athlete's performance.

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50. As for claim 139, DeLuca does not specifically show the apparatus of claim 129 wherein the at least one sensor is a sensor for detecting acceleration changes. However, Amano shows the apparatus wherein the at least one sensor is a sensor for detecting acceleration changes (col. 16 line 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the acceleration changes sensor of Amano with the apparatus of DeLuca because it would provide for determining the body moment in accordance with the measurement of the pulse rate sensor in order to provide guidance to the athlete's performance.

51. As for claim 140, DeLuca does not specifically show the apparatus of claim 129 wherein the at least one sensor is a sensor for detecting light. However, Amano shows the apparatus wherein the at least one sensor is a sensor for detecting light (col. 16 lines 19-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the light detector of Amano with the apparatus of DeLuca because it would provide for measuring the user's pulse rate from the light emitting diode in order to provide guidance to the athlete's performance.

52. As for claim 141, DeLuca does not specifically show the apparatus of claim 129 wherein the at least one sensor is a sensor for detecting temperature. However, Amano shows the apparatus wherein the at least one sensor is a sensor for detecting temperature (col. 17 lines 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the temperature detector of Amano with the apparatus of DeLuca because it would provide for determining the body temperature in accordance with the measurement of the pulse rate sensor in order to provide guidance to the athlete's performance.

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53. Claim 157 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view of Amano, further in view of McNabb and further in view of Durbin et al. U.S. Patent No. 6,039,258 (hereinafter Durbin) and further in view of King et al U.S. Patent No. 4,565,999 (hereinafter King). DeLuca shows the apparatus of claim 146 wherein the sensor is a sensor including biological sensor, weight sensor (col. 1 lines 12-15). DeLuca does not specifically show the apparatus including: temperature sensor, acceleration sensor, radiation sensor, chemical sensor, bar code sensor, inventory tag sensor, motion sensor, infrared sensor, pH level sensor, heart monitor sensor. However, Amano shows the apparatus including temperature sensor (col. 17 lines 5-10), acceleration sensor (col. 16 line 28) and heart monitor sensor (col. 20 lines 36-40). Furthermore, McNabb shows the apparatus including chemical sensor and pH level sensor (col. 12 lines 58-63). Furthermore, Durbin shows the apparatus including bar code sensor, inventory tag sensor, infrared sensor (col. 4 lines 18-23) and motion sensor (col. 7 lines 60-66). In addition, King shows the apparatus including radiation sensor (col. 8 lines 10-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Amano with the apparatus of DeLuca because it would provide for determining athlete activities in accordance with the measurement of the heath's monitoring sensors in order to provide guidance to the athlete's performance. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of McNabb with the apparatus of DeLuca because it would provide for detecting any chemical composition such as moisture content within soil for analysis in order to improve the soil condition. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Durbin with the apparatus of DeLuca

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because it would provide for data collecting operation which activated upon triggering a motion sensors. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of King with the apparatus of DeLuca because it would provide for detecting radiation patterns in order to recognize the direction of an object in translational motions.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thomas Pham; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Friday from 7:30AM- 4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *John Follansbee*, can be reached on (703) 305-8498 or via e-mail addressed to [*joh.follansbee@uspto.gov*]. The fax number for this Group is (703) 308-5403.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**thomas.pham@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas K. Pham  
*Patent Examiner*

tp  
April 14, 2003



**JOHN FOLLANSBEE  
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